REMARKS

This Amendment is filed in response to the Office Action dated October 26, 2007. For the following reasons the application should be allowed and the case passed to issue. No new matter is introduced by this amendment. Support for the amendment to claims 1, 5, and 15 is found in the specification at page 2, lines 18 to 20.

Claims 1-8 and 13-15 are pending in this application. Claims 13 and 14 have been withdrawn pursuant to a restriction requirement. Claims 1-12 and 15 are rejected. Claims 1, 5, and 15 have been amended in this response. Claims 9-12 have been canceled in this response.

Information Disclosure Statement

The Office Action included initialed copies of the PTO-1449 forms submitted with the Information Disclosure Statements (IDS) filed July 18, 2007 and January 24, 2007. As we explained in the response filed October 9, 2007, the Examiner apparently inadvertently did not initial the entry for the April 18, 2007 Office Action on the June 25, 2007 IDS. It is respectfully requested that the Examiner consider this entry and return fully initialed Information Disclosure Statements with the next official action.

Claim Rejections Under 35 U.S.C. § 102

Claims 9-12 were rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Takemura et al. (U.S. Pat. No. 6,440,232) (Takemura '232). This rejections is traversed, and reconsideration and withdrawal thereof respectfully requested.

Claims 9-12 have been canceled, thus this rejection is moot.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takemura et al. '232 in view of Takemura et al. (US 6,224,688) (Takemura et al. '688). The Examiner considered a transmission component as a component capable of transmitting a force. The Examiner acknowledged that Takemura et al. '232 did not disclose a grain size number exceeding 10. The Examiner relied on the Takemura et al. '688 teaching of a rolling bearing with a nitriding layer have a grain size of 11 or above. The Examiner considered the fracture stress to be inherent.

Claims 1-8 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takemura et al. ('232) in view of Takemura et al. ('688) and further in view of Maeda et al. (US 6,423,158). The Examiner recognized that Takemura et al. ('232) and ('688) do not disclose a tapered rolling bearing having an inner ring, an outer ring, and a tapered roller. The Examiner relied on the teaching of Maeda et al. to conclude that it would have been obvious to modify the bearing of Takemura et al. '688 by using a tapered roller to support both radial and thrust loads.

These rejections are traversed, and reconsideration and withdrawal thereof respectfully requested.

Takemura et al. ('232), Takemura et al. ('688), and Maeda et al., whether taken in combination, or taken alone do not suggest the claimed transmission components because the cited references do not suggest that the transmission component has a **grain size number of 11 or greater and a non-diffusible hydrogen content of at most 0.5 ppm**, as required by claims 1, 5, and 15.

The secondary quenching temperatures of Takemura et al. '232 would not provide the claimed grain size number. As shown in Table 1 of the present invention, secondary quenching

at the temperatures disclosed by Takemura et al. `232 produce larger grain sizes. The Examiner's assertion that the non-diffusible hydrogen content in the cited references would have been zero because it is not disclosed in the cited references is strenuously traversed. The Examiner's unsupported assertion is merely conclusory. As clearly shown in Table 1, conventional quenching techniques and conventional carbonitrided methods provide components with non-diffusible hydrogen. Thus, the Examiner does not have a basis for asserting that because a reference is silent about non-diffusible hydrogen it does not contain non-diffusible hydrogen.

Further, it would not have been obvious to combine Takemura et al. `232 and Takemura et al. `688, as asserted by the Examiner, to obtain the claimed component because Takemura `232 teach carbonitriding and Takemura et al. `688 teach away from carbonitriding. Takemura et al. teach that carbonitriding "costs a great deal" and "cannot be expected to obtain fine crystal grains" (column 2, lines 52 to 56). Further, even if Takemura et al. `232 and Takemura et al. `688 were combined the claimed component would not result, as the secondary quenching temperatures of Takemura et al. `232 would produce grain sizes that are too large. Maeda et al. do not cure the deficiencies of Takemura et al. `232 and `688, as Maeda et al. do not suggest the transmission component having a grain size number of 11 or greater and a non-diffusible hydrogen content of at most 0.5 ppm.

Obviousness can be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge readily available to one of ordinary skill in the art. *In re Kotzab*, 217 F.3d 1365, 1370 55 USPQ2d 1313, 1317 (Fed. Cir. 2000); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). There is no suggestion in Takemura et al.

('232), Takemura et al. ('688), and Maeda et al. to modify the transmission component of Takemura et al. ('232) to have a nitriding layer formed by a carbonitriding process at a surface layer, an austenite grain with a grain size number of 11 or greater, and a non-diffusible hydrogen content of at most 0.5 ppm, as required by claim 1; a nitriding layer formed by a carbonitriding process at a surface layer, a fracture stress value of at least 2650 MPa, a grain size number of 11 or greater, and a non-diffusible hydrogen content of at most 0.5 ppm, as required by claim 5; and a nitriding layer formed by a carbonitriding process, an austenite grain with a grain size number of 11 or greater, and a non-diffusible hydrogen content of at most 0.5 ppm, as required by claim 11.

The only teaching of the claimed transmission components is found in Applicant's disclosure. However, the teaching or suggestion to make a claimed combination and the reasonable expectation of success must not be based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). The Examiner's unsupported, conclusory assertions are not sufficient to establish a prima facie case of obviousness.

In view of the above amendments and remarks, Applicants submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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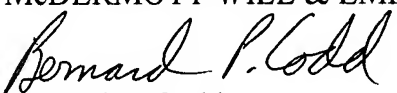

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